DOCUMENT RESUME

ED 370 006 CG 025 282

TITLE	Is This the Place...for Healthy Kids? Results of the 1991 Utah Youth Risk Behavior and School Health Education Surveys.
INSTITUTION	Utah State Office of Education, Salt Lake City.; Utah Univ., Salt Lake City.
SPONS AGENCY	Centers for Disease Control (DHHS), Atlanta, GA. Div. of Adolescent and School Health.
PUB DATE	Oct 91
CONTRACT	U63-CCU803058-04
NOTE	58p.; For a later report, see CH 025 283.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Acquired Immune Deficiency Syndrome; *Adolescent Development; Adolescents; *Health Education; High Schools; Intervention; Nutrition; Physical Activity Level; Self Destructive Behavior; Sexuality; *Student Attitudes; *Student Behavior; *Substance Abuse
IDENTIFIERS	Utah

ABSTRACT

This report describes the results of two statewide surveys conducted during Spring, 1991: the 1992 Utah Youth Risk Behavior Survey (YRBS) and the 1991 Utah School Health Education Survey (SHES). Sixty-three schools were randomly selected to participate in the state-level YRBS, and all 311 public and private schools with students in grades 7 through 12 were asked to complete the SHES. Many health problems experienced by youth are caused by a few preventable behaviors, such as drinking and driving and unprotected sexual intercourse. Effective educational programs may be able to reduce the extent to which adolescents engage in health risk behaviors. The results of this report can be used to identify adolescent needs, develop curricula to meet those needs, and design teacher training based on effective curricula. The survey included questions on the following types of health risk behaviors: (1) Intentional and Unintentional Injuries; (2) Tobacco, Alcohol, and Other Drug Use; (3) Behaviors That Result in HIV Infection, Other Sexually Transmitted Diseases and Unintended Pregnancy; (4) Dietary Excesses and Imbalances; and (5) Physical Inactivity. A summary of the results as well as a list of references are also included. (BF)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 370 006

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

R. Raphael

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CG025282

C6

1991 UTAH YOUTH RISK BEHAVIOR AND SCHOOL HEALTH EDUCATION SURVEY REPORT

Prepared for the Utah State Office of Education,
Jay B. Taggart, State Superintendent of Public Instruction

by

Research and Evaluation Program
Health Behavior Laboratory
University of Utah

This report was completed with support provided through cooperative agreement #U63-CCU803058-04 with the Division of Adolescent and School Health of the U.S. Centers for Disease Control
October, 1991

ACKNOWLEDGMENTS

Sincere appreciation is expressed to school district superintendents, school principals, and the students and teachers who participated in the 1991 Utah Youth Risk Behavior Survey. The authors also would like to thank Jay B. Taggart, State Superintendent of Public Instruction; Bruce Griffin, State Associate Superintendent, Division of Strategic Instructional Services; and the Utah State Office of Education Educational Data Acquisition Advisory Committee for their support. Special appreciation is extended to Laurie Lacy, Director of the Utah State Office of Education AIDS Education Program, for her support and assistance.

Our gratitude is extended to Barbara J. Williams, Nancy Speicher, Annie Golden and the staff of Westat, Inc. for assisting in sampling procedures and to Jim Green and Trace Searles for weighting results statistically to represent all grade 9 through 12 students in Utah.

We recognize the Utah State Department of Health and the Utah State Department of Public Safety for their reports which allowed us to describe the outcomes of the health risk behaviors discussed in this report. Finally, we would like to express our appreciation to Laura Kann, Chief of Surveillance Research Section, and the staff at the Division of Adolescent and School Health, U.S. Centers for Disease Control for developing the survey instrument and providing the background text and materials used in preparing this report.

TABLE OF CONTENTS

INTRODUCTION 1

SURVEY METHODS 3

YOUTH RISK BEHAVIOR SURVEY RESULTS 5

Intentional and Unintentional Injuries 7
Tobacco, Alcohol, and Other Drug Use 15
Behaviors That Result in HIV Infection, Other Sexually Transmitted Diseases and Unintended Pregnancy 22
Dietary Excesses and Imbalances 29
Physical Inactivity 34

SCHOOL HEALTH EDUCATION SURVEY RESULTS 37

SUMMARY AND CONCLUSIONS 44

REFERENCES 47

INTRODUCTION

INTRODUCTION

This report describes the results of two statewide surveys conducted during Spring, 1991: the 1991 Utah Youth Risk Behavior Survey (YRBS) and the 1991 Utah School Health Education Survey (SHES). Health education researchers at the University of Utah conducted the surveys and prepared this report for the Utah State Office of Education AIDS Education Program. Sixty-three schools were randomly selected to participate in the state-level YRBS, and all 311 public and private schools with students in grades 7 through 12 were asked to complete the SHES.

This report is intended for use by educators across Utah to help focus the development of effective school-based comprehensive health education programs. Permission is granted to quote or reproduce with credit to the Utah State Office of Education and the University of Utah. This report can also be shared with parents and other interested parties to inform these decision makers about the need for effective school health education programs in Utah. Similar reports were prepared for state-level health education programs in Idaho, Montana, and Wyoming.

The health problems experienced by youth are caused by a few preventable behaviors, such as drinking and driving and unprotected sexual intercourse. Tobacco use, excessive consumption of fats, and insufficient physical activity are known to lead to diseases which are not manifest until adulthood, but result from habits formed during adolescence. Effective educational programs are needed to reduce the extent to which adolescents engage in these priority health risk behaviors.

To reduce overall student risk, a health education program must be as comprehensive as possible and incorporate a coordinated, collaborative effort among schools, parents, and the community. Because school is "central to the development of adolescent socialization... [schools are] the place where daily reinforcement for behavior change must occur" (Eggert, Seyl, and Nicholas, 1990). It is important that schools provide accurate information and repeated opportunities for students to develop skills that will enable them to reduce:

- Behaviors that result in intentional and unintentional injuries
- Tobacco use
- Alcohol and other drug use
- Behaviors that result in HIV infection, other sexually transmitted diseases, and unintended pregnancies
- Dietary indiscretions
- Physical inactivity

The results presented in this report can be used to identify adolescent needs, develop curricula to meet those needs, and design teacher training based on effective curricula. This report should be shared among school administrators, teachers, parents, and the community to gain informed support for school-based programs that incorporate the principles and components of effective comprehensive health education programs.

SURVEY METHODS

SURVEY METHODS

The National Youth Risk Behavior Survey (YRBS) was designed by experts nationwide through the Centers for Disease Control to measure the extent to which adolescents engage in health risk behaviors including behaviors that result in intentional and unintentional injuries; tobacco, alcohol, and other drug use; sexual behaviors; dietary indiscretions; and physical inactivity.

The 1991 Utah YRBS was approved for use in Utah schools by the State Office of Education and its Educational Data Acquisition Advisory Committee (EDAAC). This survey was identical to the National YRBS with one exception: questions about sexual behavior were omitted. Randomly selected school districts each made the decision to participate in the survey and decided whether and how parental consent would be sought. A total of 4,580 students completed the random sample survey in 214 classrooms across the state.

Superintendents of school districts were contacted during November, 1990 to obtain approval to approach principals of randomly selected schools about the survey. Sufficient time was allowed to gain school board and/or parent approval, and to answer any questions about the survey. All 63 randomly selected schools agreed to participate, and the results on which this report is based represent all students in grades 9 through 12 in Utah. Results have been weighted statistically to allow readers to make important inferences about the priority health risk behaviors of all students in grades 9 through 12 in Utah.

During Spring, 1991, students in randomly selected second period classes were asked to complete the 70-item, multiple choice Utah YRBS questionnaire. Locally identified contact persons were provided, at no cost, with all information and materials necessary to administer the survey and return the completed data sheets for processing.

Teachers administering the survey to students were provided with detailed written instructions to ensure uniform survey administration across sites. To encourage accurate responses to sensitive questions, a strict protocol was implemented to protect the privacy and confidentiality of all participating students. Participation in the survey was voluntary. Students could decline to participate, turn in blank or incomplete survey forms, or stop completing the survey at any time.

A separate survey, the 1991 Utah School Health Education Survey (SHES) was delivered by mail to 311 schools during Spring, 1991. A contact person designated by each school's principal was asked to complete the survey. Two hundred twelve completed surveys were returned in prepaid envelopes for computer file coding and data analysis.

YOUTH RISK BEHAVIOR SURVEY RESULTS

YOUTH RISK BEHAVIOR SURVEY RESULTS

Of the 4,580 students participating in the 1991 Utah YRBS, 50.3% (2,302) were female and 49.6% (2,270) were male. By grade, 29.5% were enrolled in the 9th grade, 22.5% in the 10th grade, 28.1% in the 11th grade, and 19.7% in the 12th grade (0.2% were ungraded or in other grades). Of the students responding to the survey, 86.5% described themselves as white, 1.2% as black, 4.9% as Hispanic, 2.2% as Asian or Pacific Islander, 2.2% as Native American or Alaskan Native, and 2.7% described themselves as other.

To facilitate an understanding of the need for effective school-based health education programs in Utah, this section of the report includes the following information for each priority health risk behavior:

- Summary statements from the U.S. Centers for Disease Control (CDC) about the consequences of engaging in the various health risk behaviors and statistics from other sources regarding these risk behaviors that are specific to Utah

- Adolescent Health Objectives for the Year 2000 from the U.S. Department of Health and Human Services, Public Health Service (PHS)

- 1991 Utah YRBS results depicted in graph- and bullet-statement-form.

This presentation format will allow the reader to draw conclusions about the importance of the priority health risk behaviors, the extent to which Utah students engage in these behaviors, and the need for effective educational programs to reduce these behaviors. Suggestions for how to address these needs are included in a Summary and Conclusions section. Perhaps these results will begin to serve Utahns as they prepare their youth to lead healthy, productive lives.

Intentional and Unintentional Injuries

Injuries are the fourth leading cause of death for all ages in Utah and the number one cause of death for those age 1-44 (Utah Department of Health, 1990).

Intentional and Unintentional Injuries

Utah's injury death rate for children is 22 per 100,000 and is higher than the national rate. Injuries to children and adolescents in Utah account for more potential years of life lost than the three leading causes of death in Utah combined (Utah Department of Health, 1990). Homicides, suicides, and motor vehicle accidents in Utah accounted for 63.2% of all fatalities for 15-24 year olds in 1989 (Utah Department of Health, 1991, January).

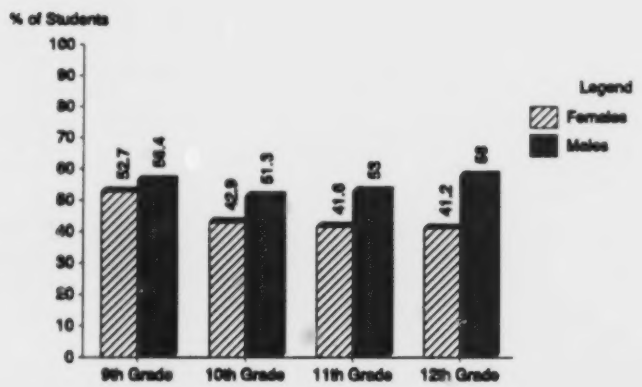
Seat Belt Use

Of the 272 people who were killed in automobile accidents in Utah during 1990, 77.3% were not wearing seat belts (Utah Department of Public Safety, 1991). Seat belt use is estimated to reduce motor vehicle fatalities by 40% to 50% and serious injuries by 45% to 55% (National Committee for Injury Prevention and Control, 1989). Increasing use of automobile safety restraint systems to 85% could save an estimated 10,000 American lives per year (U.S. Department of Health and Human Services, 1990a). Seat belt use in Utah could save as many as 136 lives.

Year 2000 Objectives:

Increase use of occupant protection systems, such as safety belts, inflatable safety restraints, and child safety seats, to at least 85% of motor vehicle occupants.

Utah YRBS Results:



- 21.6% of all students reported "Always" wearing a seatbelt, and 28.6% reported wearing a seatbelt "Most of the Time."

Percentages of All Students Who Reported Never, Rarely, or Sometimes Wearing Seatbelts When Riding in a Car Driven By Someone Else

Motorcycle and Bicycle Safety

Eighteen motorcyclists were killed in Utah during 1990. Of the motorcyclists killed, 44.4% (n = [illegible] them were under the age of 25 and 72.2% (n = 13) of them were not wearing helmets (Utah Department of Public Safety, 1991). Eight bicyclists were killed in Utah during 1990 (Utah Department of Public Safety, 1991).

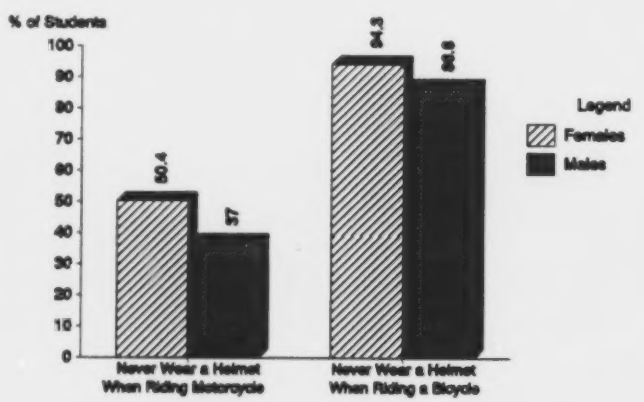
Head injury is the leading cause of death in motorcycle and bicycle crashes (National Committee for Injury Prevention and Control, 1989). Unhelmeted motorcyclists are two times more likely to incur a fatal head injury and three times more likely to incur a nonfatal head injury than helmeted riders (National Highway Traffic Safety Administration, 1980). In addition, the risk of head injury for unhelmeted bicyclists is more than 6 1/2 times greater than for helmeted riders (Thompson, Rivara, & Thompson, 1989).

Year 2000 Objectives:

Increase use of helmets to at least 80% of motorcyclists and 50% of bicyclists.

Utah YRBS Data:

- 45.0% of all male students and 65.3% of all female students did not ride a motorcycle in the past year.
- 45.3% of males who rode a motorcycle (65.0%) and 19.2% of females who rode a motorcycle (44.7%) rode more than 10 times in the past 12 months.
- 13.7% of all males and 18.5% of all females did not ride a bicycle in the past year.



Percentages of Students Who Rode Motorcycles (44.7%) or Bicycles (83.7%) Who Reported Never Wearing a Helmet While Riding

- 73.2% of males who rode a bicycle (86.3%) and 95.1% of females who rode a bicycle (81.5%) rode more than 10 times in the past 12 months.

Motor Vehicle Safety

In 1989, motor vehicle accidents accounted for 41.3% of the deaths of youth age 15-25 in Utah (Utah Department of Health, 1991, January). Based on national statistics, two in five Utahns can expect to be involved in an alcohol-related traffic accident during their lifetime (Utah Department of Health, 1990). Although driving under the influence was the sixth leading cause of car accidents in Utah during 1990, it was the second leading cause of fatal crashes (Utah Department of Public Safety, 1991). During 1990, 22% of all fatal car accidents in Utah were alcohol-related and 12% of drivers involved in alcohol-related accidents were under 21 years of age (Utah Department of Public Safety, 1991).

Automobile crash injuries, more than half of which involve alcohol (U. S. Department of Health and Human Services, 1990b), are the leading cause of death among youth age 15-24 in the United States (National Highway Traffic Safety Administration, 1988). Alcohol-related traffic accidents cause serious injury and disability and are the leading cause of spinal cord injury among young adults (National Highway Traffic Safety Administration, 1987).

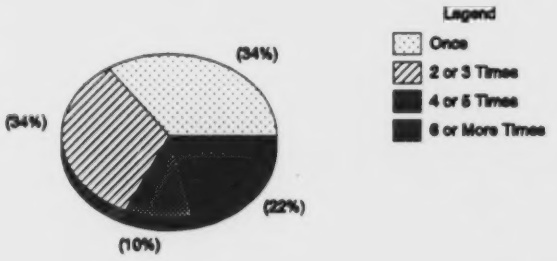
Year 2000 Objectives:

Reduce deaths among youth age 15-24 caused by motor vehicle crashes to no more than 33 per 100,000 people.

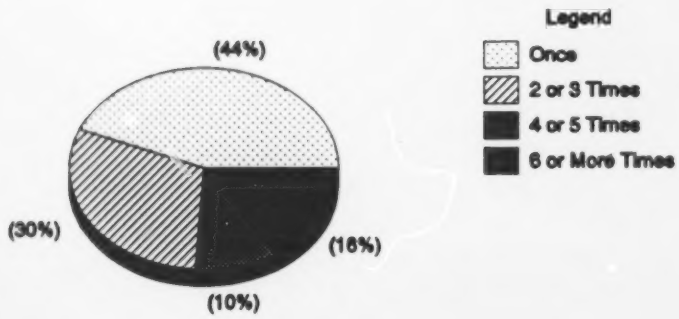
Reduce deaths among people age 15-24 caused by alcohol-related motor vehicle crashes to no more than 18 per 100,000.

Utah YRBS Data:

- 24.8% of all students reported that at least once in the past 30 days they had been in a car driven by someone who had been drinking. 31.6% of these students had done so 4 or more times in the past 30 days.



Percentage of Those Students (24.8%) Who Rode in a Vehicle in the Past Month Driven by Someone Who Had Been Drinking, by Number of Times



Percentages of Students 16 Years or Older (10.8%) Who Reported That in the Past 30 Days They Drove a Vehicle After Drinking, by Number of Times

- 91.0% of 12th grade females and 84.1% of 12th grade males did not drive while drinking in the past 30 days.

Carrying of Weapons

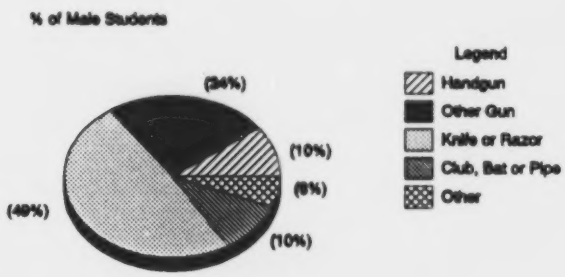
4.9% of all fatalities among 15-24 year olds in Utah was due to homicide during 1989. This was the fifth leading cause of death in this age range (Utah Department of Health, 1990).

Approximately nine out of ten homicide victims in the U.S. are killed with a weapon of some type, such as a gun, knife, or club. Nationally, homicide is the second leading cause of death among all adolescents (National Center for Health Statistics, 1990a) and the leading killer of black adolescents (U.S. Department of Health and Human Services, 1990b).

Year 2000 Objectives:

Reduce by 20% the incidence of weapon-carrying by adolescents age 14-17.

Utah YRBS Data:



Percentages of All Male Students (42.0%) Who Carried Weapons in the Past Month, By Type of Weapon

- 42.5% of all male students reported carrying a weapon in the past month as compared to 42.1% of male students who described themselves as Hispanic.
- Fewer than 7% of all females reported carrying a weapon in the past 30 days.
- 20.8% of all males and 2.3% of all females reported carrying a weapon more than five days during the past 30 days.

- Of the students (23.9%) who reported carrying weapons in the past 30 days, 10.2% of the males and 5.4% of the females carried a handgun most often.
- Of the males who described themselves as Hispanic and who indicated they carried weapons in the past month (42.1%), one out of four reported they carried a handgun most often as compared to 8.2% of the males who describe themselves as white and who indicated that they carried weapons in the past 30 days (41.1%).
- Of the students (23.9%) who reported carrying weapons in the past month, knives were carried most often by 61.2% of the females and 48.8% of the males.

Physical Fighting

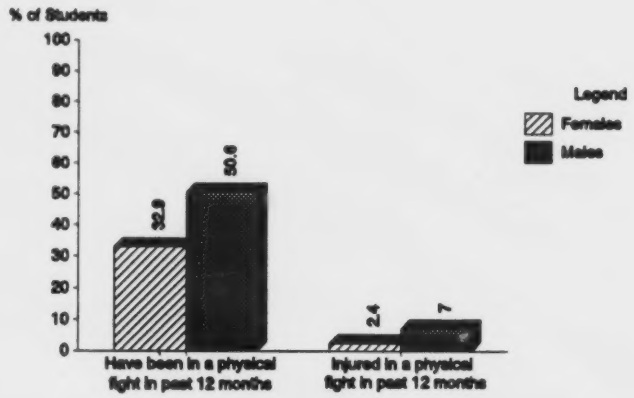
Fighting is the most important antecedent behavior for a great proportion of homicides among adolescents (U.S. Department of Health and Human Services, 1990a). The immediate accessibility of a firearm or other lethal weapon often is the factor that turns a violent altercation into a lethal event (Rivara, 1985). Unintentional firearm-related fatalities are a critical problem among children and young adults in the United States (Wood & Mercy, 1988).

Year 2000 Objectives:

Reduce by 20% the incidence of physical fighting among adolescents age 14-17.

Utah YRBS Data:

- 27.1% of all males reported fighting with a friend or someone they know, the last time they were in a physical fight.
- 24.8% of all females reported fighting with a parent, brother, sister, or family member the last time they were in a physical fight.



Percentages of All Students Involved and/or Injured in a Physical Fight in the Past 12 Months

- Of those students who described themselves as Hispanic, 61.2% of the males and 45.6% of the females indicated they have been in a physical fight during the past year and 17.2% of the males and 6.1% of the females reported they were injured in a physical fight in the past year.

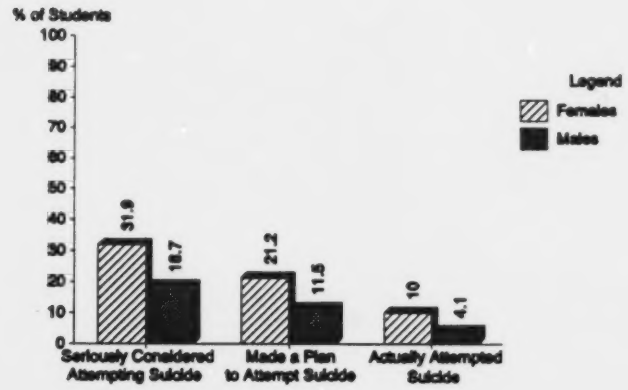
Suicide

During 1989, suicide accounted for 17% of all fatalities in youth age 15-24 in Utah. This was the second leading cause of death in this age range in Utah (Utah Department of Health, 1991, January). Nationally, suicide is the third leading cause of death among youth age 15-24 and the second leading cause of death among white males age 15-24 (National Center for Health Statistics, 1990b). The suicide rate for persons age 15-24 has tripled since 1950 (U.S. Department of Health and Human Services, 1990b).

Year 2000 Objectives:

Reduce by 15% the incidence of injurious suicide attempts among youth age 14-19.

Utah YRBS Data:



Percentages of Students by Gender Who Reported Seriously Considering Suicide, Making a Plan for Suicide and/or Actually Attempting Suicide in the Past 12 Months

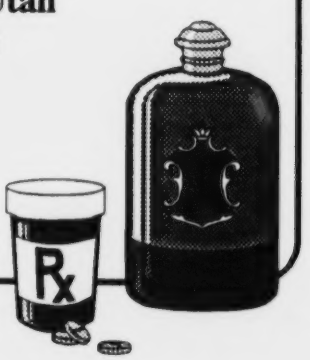
- Of those who attempted suicide (6.9%) in the past 12 months, 30.0% reported the attempt resulted in an injury, poisoning, or overdose that had to be treated by a physician or nurse.
- 11.9% of 9th grade females reportedly attempted suicide in the past year as compared to 7.0% of 12th grade females.

- Of the students who described themselves as Hispanic, 41.6% of the females and 21.0% of the males seriously considered attempting suicide in the past 12 months and 16.8% of the females and 8.7% of the males reported they actually attempted suicide in the past year.

It is clear that students in Utah are engaging in behaviors that result in preventable injury and death.

Tobacco, Alcohol, and Other Drug Use

"Alcohol is the most abused substance in Utah followed by tobacco and marijuana" (Utah Department of Health, 1990).



Tobacco, Alcohol, and Other Drug Use

Tobacco Use

In Utah, 2,700 residents died prematurely between 1984 and 1987 due to tobacco use (Utah Department of Health, 1990). In 1989, smoking related illnesses, including cardiovascular disease, chronic obstructive pulmonary diseases, and cancer of the mouth, lungs, and bladder, accounted for nearly half of all deaths (Utah Department of Health, 1991, January).

Tobacco use is the single most important preventable cause of death in the United States, accounting for one of every six deaths in the United States. Smoking is a major risk factor for heart disease; chronic bronchitis; emphysema; and cancers of the lung, larynx, pharynx, mouth, esophagus, pancreas, and bladder. If 29% of the 70 million children now living in the United States smoke cigarettes as adults, then at least 5 million of them will die of smoking-related diseases (Office on Smoking and Health, 1989). In addition, smoking is related to poor academic performance and the use of illicit drugs and alcohol (Johnston, O'Malley, & Bachman, 1987). Over one million teenagers begin smoking each year (U.S. Department of Health and Human Services, 1990b).

Oral cancer occurs more frequently among smokeless tobacco users than nonusers and may be 50 times as frequent among long-term snuff users. Smokeless tobacco use can lead to the development of oral leukoplakia and gingival recession and can cause addiction to nicotine (Public Health Service, 1986). Between 1970 and 1986, the prevalence of snuff use increased 15 times and chewing tobacco use increased four times among men age 17-19 (Office on Smoking and Health, 1989).

Year 2000 Objectives:

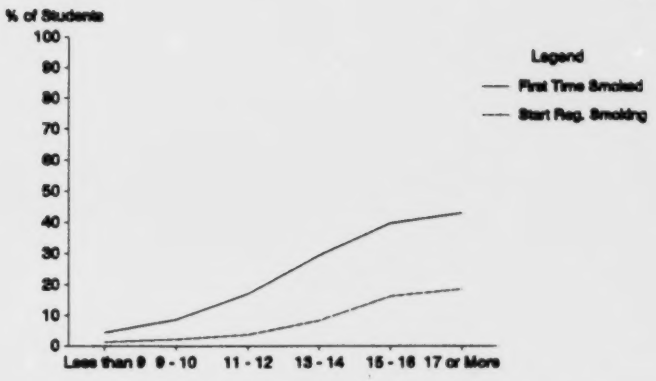
Increase by at least 1 year the average age of first use of cigarettes, alcohol, and marijuana by adolescents age 12-17.

Reduce the initiation of cigarette smoking by children and youth so that no more than 15% have become regular cigarette smokers by age 20.

Reduce smokeless tobacco use by males age 12-24 to a prevalence of no more than 4%.

Utah YRBS Data:

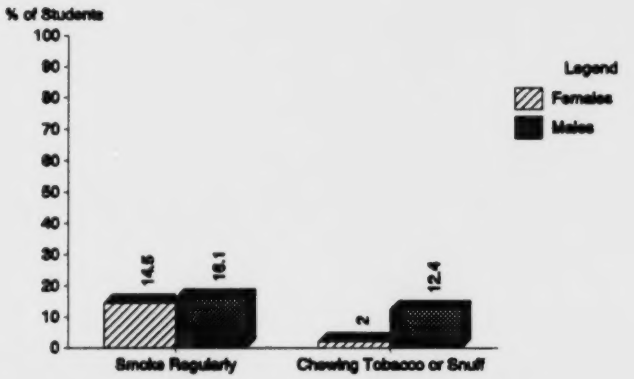
- For all students, the median age of first use of cigarettes was 13 years old.
- 30.5% of all females and 32.7% of all males reported they have already tried cigarette smoking or they think they will try smoking in the next 12 months.



Age at Which 12th Grade Students First Smoked a Whole Cigarette and/or Age When 12th Grade Students Reported They Started Smoking Regularly

- 15.3% of all students responded that they smoke regularly.
- 5.8% of all students smoked cigarettes all 30 days during the past 30 days.
- 72.1% of the students who described themselves as Hispanic said they had tried cigarette smoking or they thought they would try smoking in the next 12 months.
- Of those students (20.0%) who reported they smoked during the past 6 months, 61.3% indicated they did try to quit smoking cigarettes during that time period.

- 14.2% of all 12th grade males reported having used chewing tobacco or snuff during the past 30 days as compared to 2.6% of the 12th grade females.
- Of the students who described themselves as Hispanic, 15.3% of the males and 5.3% of the females indicated they used chewing tobacco or snuff during the past month.



Percentages of Students by Gender Who Reported They Smoked Regularly or Used Chewing Tobacco or Snuff in the Past 30 Days

Alcohol Use

Alcohol is a major factor in approximately half of all homicides, suicides, and motor vehicle crashes (Perrine, Peck, & Fell, 1988) which are the leading causes of death and disability among young people (U.S. Department of Health and Human Services, 1990b). Heavy drinking among youth has been linked conclusively to physical fights, destroyed property, academic and job problems, and trouble with law enforcement authorities (Dryfoos, 1987). Approximately 100,000 American deaths per year are attributable to misuse of alcohol (U.S. Department of Health and Human Services, 1990b).

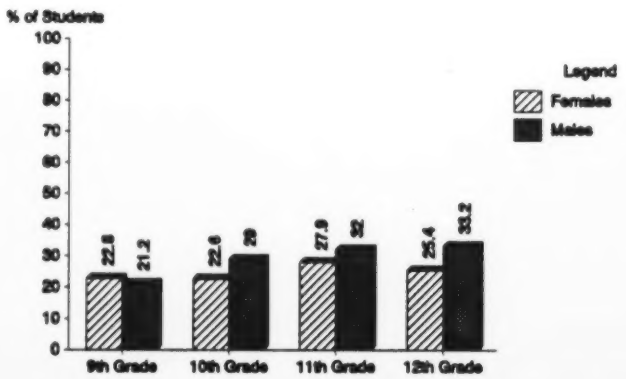
Year 2000 Objectives:

Reduce the proportion of young people who have used alcohol in the past month to 12.6% of youth age 12-17 and 29.0% among youth age 18-20.

Reduce the proportion of high school seniors and college students engaging in recent occasions of heavy drinking of alcoholic beverages to no more than 28% of high school seniors and 32% of college students.

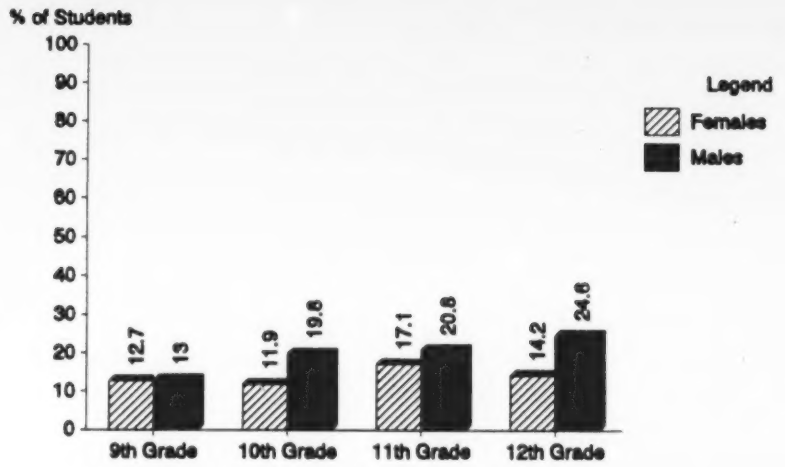
Utah YRBS Data:

- 9.3% of all students estimated they had at least one drink of alcohol on at least 100 days in their life.
- 15.9% of all 12th grade males and 11.8% of all 12th grade females estimated they had at least one drink of alcohol on at least 100 days in their life.
- 17.0% of those students who described themselves as Hispanic reported they had a drink on at least 100 days in their lifetime.



Percentages of All Students Who Drank Alcohol on at Least 1 Day During the Past 30 Days

- 17.3% of 12th grade students reported having had a drink on at least 3 days in the past 30 days.
- 27.2% of those students who described themselves as Hispanic indicated they had a drink on at least 3 days in the past month.



Percentages of All Students Who Reported That They Drank 5 or More Drinks on 1 or More of the Past 30 Days

- 8.2% of all students reported they had 5 or more drinks in a row on 3 or more days during the past month.
- 30.6% of all students who described themselves as Hispanic indicated they had 5 or more drinks in a row on at least 1 day in the past month.

Other Drug Use

One in four American adolescents is estimated to be at very high risk for the consequences of alcohol and other drug problems (Dryfoos, 1987). Drug abuse is related to morbidity and mortality due to injury, early unwanted pregnancy, school failure, delinquency, and transmission of sexually transmitted diseases, including HIV infection (U.S. Department of Health and Human Services, 1990a). Despite improvements in recent years, illicit drug use is greater among high school students and other young adults in America than in any other industrialized nation in the world (Johnston, O'Malley, & Bachman, 1989).

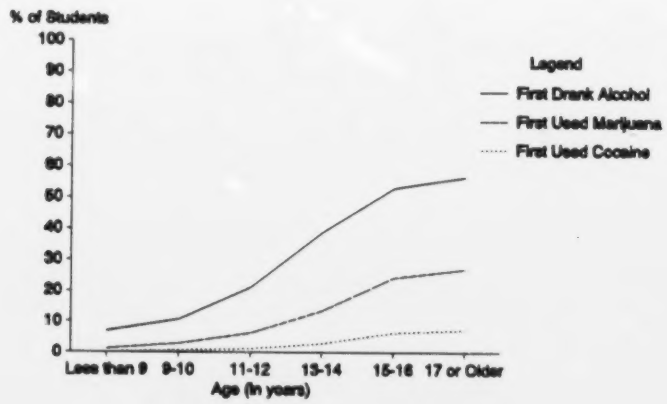
Year 2000 Objectives:

Increase by at least 1 year the average age of first use of cigarettes, alcohol, and marijuana by adolescents age 12-17.

Reduce the proportion of young people who have used marijuana in the past month as follows: 3.2% of youth age 12-17 and 7.8% of youth age 18-20 (marijuana use); 0.6% of youth age 12-17 and 2.3% of youth age 18-20 (cocaine use).

Reduce to no more than 3% the proportion of male high school seniors who use anabolic steroids.

Utah YRBS Data:



Reported Age When 12th Grade Students Began Drinking Alcohol, Using Marijuana, and Using Cocaine

- 8.6% of all students reported smoking marijuana at least once during the past 30 days.
- 23.2% of students who described themselves as Hispanic indicated they used marijuana at least once during the past month.
- 3.2% of all students reported having smoked marijuana regularly.

- 5.2% of all students reported having used cocaine at least once during their lifetime and 3.3% of all students reported having used the crack or freebase forms of cocaine in their lifetime.

- 6.4% of those students who described themselves as Hispanic indicated they have used cocaine at least once.

- 2.1% of all students reported using cocaine at least once during the past month.

- 14.5% of all students indicated they have used other drugs, such as pills without a doctor's prescriptions, LSD, PCP, ecstasy, mushrooms, speed, ice, or heroin.

- 25.1% of the students who described themselves as Hispanic reported they have used other drugs, such as pills without a doctor's prescription, LSD, PCP, ecstasy, mushrooms, speed, ice, or heroin.

- 6.4% of 12th grade males and 4.0% of 9th grade males reported having taken steroid pills or shots without a doctor's prescription.

- 8.1% of males who described themselves as Hispanic reported having taken steroid pills or shots without a doctor's prescription.

- When asked if they had ever injected or shot up illegal drugs, 7.2% of all the students responded that they had. 7.4% of all 12th grade students indicated they had injected or shot up illegal drugs.

- 10.5% of all students who described themselves as Hispanic reported they had injected or shot up illegal drugs.

A large percentage of Utah adolescents are using tobacco, alcohol, and other drugs putting them at risk for preventable diseases and injuries.

Behaviors That Result in HIV Infection, Other Sexually Transmitted Diseases, and Unintended Pregnancy

"As of May 31, 1991, 691 cases of AIDS among teenagers (ages 13-19) in the U.S. were reported to the Centers for Disease Control. However, more than 20 percent (35,635) of persons reported with AIDS are in their 20's. Given the average ten year period between infection and onset of symptoms, the majority of these people were probably infected with HIV during their teenage years" (Centers for Disease Control, 1991).

Behaviors That Result in HIV Infection, Other Sexually Transmitted Diseases, and Unintended Pregnancy

Although the 1991 Utah Youth Risk Behavior Survey did not ask adolescents directly about their sexual behaviors, data available from the Utah Department of Health indicated that youth in Utah are engaging in behaviors that put them at risk for HIV infection, other sexually transmitted diseases, and unintended pregnancy.

AIDS/HIV Risk and Prevention Education

Prior to 1990, 325 cases of AIDS and 188 deaths attributed to AIDS were reported in Utah. An additional 4,000 people were estimated to be infected with HIV in Utah (Utah Department of Health, 1990). Between 1983 and 1987, 4% of the AIDS cases reported in Utah were in youth under the age of 18 (Utah Department of Health, 1987).

Acquired immunodeficiency syndrome (AIDS) is the only major disease in the United States for which mortality is increasing (U.S. Department of Health and Human Services, 1990b). AIDS is the 7th leading cause of death for youth age 15-24 (National Center for Health Statistics, 1989) and is the 7th leading cause of years of potential life lost before age 65 in the United States (Centers for Disease Control, 1989a).

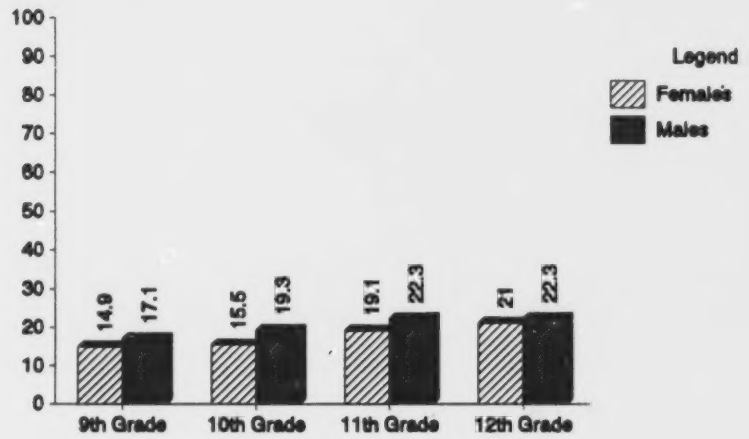
In a 1990 survey of Utah adolescent, 44.7% of all 9th through 12th grade students indicated that they have not talked with their parents about AIDS and HIV infection (Gray, 1990a). In a 1986 national survey, teens said they would like to communicate more about sex and HIV infection with their parents. Half of the teens in a 1988 survey said their parents have not provided enough information about sex and they want more discussion about sex with their parents (Miller & Laing, 1989).

Year 2000 Objectives:

Confine the prevalence of HIV infection to no more than 800 per 100,000.

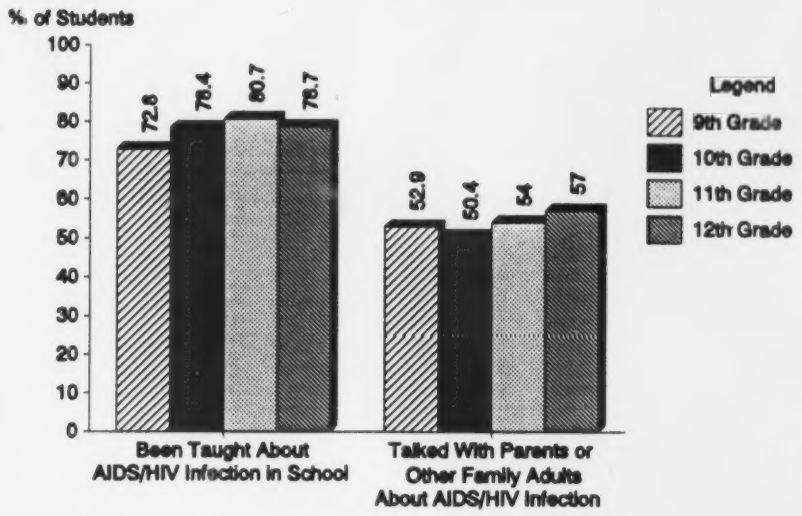
Utah Data:

- 17.3% of all females and 20.1% of all males reported they think they have done something that would put them at risk for getting AIDS/HIV infection.
- 27.8% of all students who described themselves as Hispanic indicated they think they have done something that would put them at risk for getting AIDS/HIV infection.

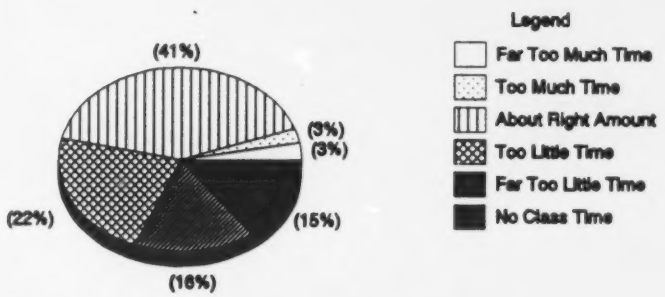


Percentages of Students by Grade Who Reported They Think They Have Done Something That Would Put Them at Risk For Getting AIDS/HIV Infection

- 90.4% of all students reported they know how to keep from getting the AIDS virus (HIV).
- 65.2% of all students reported they think the information they have received in school will help them to avoid getting the AIDS virus (HIV).
- 12.0% of all students indicated they have not received any information about AIDS/HIV infection in school.



Percentages of Students by Grade Who Reported Having Been Taught in School and/or Having Talked With Parents or Other Family Adults About AIDS/HIV Infection



Percentages of the Amount of Classtime Students Report Having Had in School Learning About AIDS/HIV Infection

Sexual Behaviors

Major risks of early sexual activity include unwanted pregnancy and sexually transmitted diseases (STDs), including HIV, as well as negative effects on social and psychological development. The number of sexual partners and age at first intercourse are associated with a higher risk of contracting STDs. Alcohol and drug use may serve as predisposing factors for initiation of sexual activity and unprotected sexual intercourse (Hofferth & Hayes, 1987).

Nationally, the average age of first sexual intercourse is 16.2 for girls and 15.7 for boys (Hayes, 1987). Approximately one-fourth of 15-year-old girls and one-third of 15-year-old boys have had sexual intercourse (Baldwin, 1990; Sonenstein, Pleck, & Ku, 1989). Among all adolescents, 77% of females and 86% of males are sexually active by age 20 (National Center for Health Statistics, 1988; Sonenstein et al., 1989). These figures are consistent with data collected from states surrounding Utah (Gray & Walton 1990b, 1990c; Gray, Walton, & Alderfer, 1991).

Year 2000 Objectives:

Reduce the proportion of adolescents who have engaged in sexual intercourse to no more than 15% by age 15 and no more than 40% by age 17.

Increase to at least 40% the proportion of ever sexually active adolescents age 17 and younger who have abstained from sexual activity for the previous three months.

Sexually Transmitted Diseases

During 1987 in Utah, 671 new cases of gonorrhea and 43 new cases of syphilis were reported (Utah Department of Health, 1987). Every year 2.5 million U.S. teenagers are infected with an STD; this number represents approximately one out of every six sexually active teens and one-fifth of the national STD cases (Centers for Disease Control, 1989b). Of the 12 million new cases of STD per year, 86% are among people age 15-29 (Division of Sexually Transmitted Diseases, 1990). STD may result in infertility, adverse effects on pregnancy outcome and maternal and child health, and facilitation of HIV transmission (U.S. Department of Health and Human Services, 1990b).

Year 2000 Objectives:

Increase to at least 60% the proportion of sexually active, unmarried young women age 15-19 and to at least 75% the proportion of sexually active, unmarried young men age 15-19 who used a condom at last sexual intercourse.

Reduce gonorrhea among adolescents age 15-19 to no more than 750 cases per 100,000 people.

Unintended Pregnancies

One out of every ten teenage girls in the United States become pregnant each year, just over 400,000 teenagers obtain abortions, and nearly 470,000 give birth (Henshaw & Van Vort, 1989; Hofferth & Hayes, 1987). In Utah during 1987, 5.3% of all births were to teenage mothers age 17 and younger (Utah Department of Health, 1988). During 1989 in Utah, 1,479 women age 15-17 were pregnant and 379 abortions were performed on those young women. 67.2% of the age 15-17 females who were reported as pregnant in Utah during 1989 were never married (Utah Department of Health, 1991, April).

Nationally, teenagers account for one third of all unintended pregnancies, with 75% of teenage pregnancies occurring among adolescents who are not practicing contraception (Westoff, 1988). The United States leads all other Western developed countries in rates of adolescent pregnancy, abortion, and childbearing (Hofferth & Hayes, 1987).

Year 2000 Objectives:

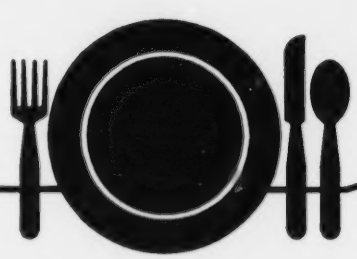
Reduce pregnancies among girls age 17 and younger to no more than 50 per 1,000 adolescents.

Increase to at least 90% the proportion of sexually active, unmarried people age 19 and younger who use contraception, especially combined method contraceptions that both effectively prevents pregnancy and provides barrier protection against diseases.

It is clear that Utah adolescents are engaging in sexual behaviors that put them at risk for HIV infection, other sexually transmitted diseases, unintended pregnancy, and other social problems.

Dietary Excesses and Imbalances

42.5% of all female students and 17.3% of all male students in Utah believe they are overweight.



Dietary Excesses and Imbalances

Obesity and Eating Disorders

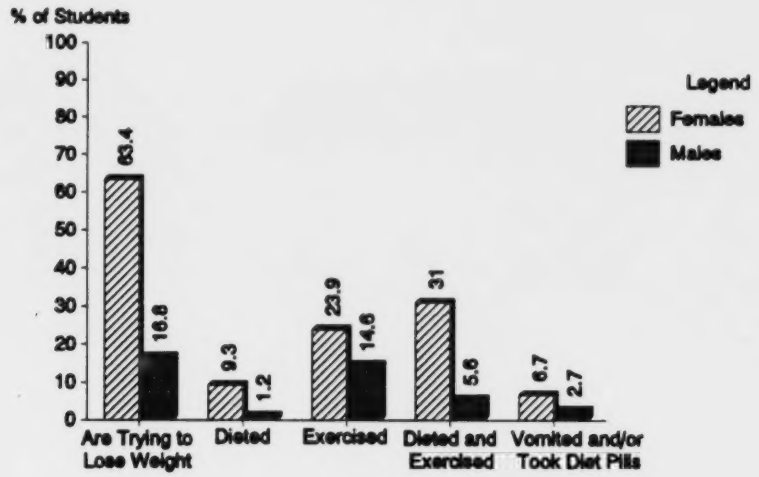
Obesity and extreme obesity appear to be increasing by as much as 39% and 64%, respectively, among youth age 12-17 (Gortmaker, Dietz, Sobol & Wehler, 1987). Obesity acquired during adolescence may persist into adulthood, increasing later risk for chronic conditions such as diabetes, heart disease, high blood pressure, stroke, some cancer, and gall bladder disease (Public Health Service, 1988). Also, adolescents often experience social and psychological stress related to obesity (Rotatori & Fox, 1989). Overemphasis on thinness can contribute to eating disorders (Public Health Service, 1988).

Year 2000 Objectives:

Reduce overweight to a prevalence of no more than 20% among people age 20 and older and no more than 15% among adolescents age 12-19.

Increase to at least 50% the proportion of overweight people age 12 and older who adopt sound dietary practices combined with regular physical activity to attain an appropriate body weight.

Utah Data:



Percentages of Students Who Reported They Are Trying to Lose Weight and the Methods of Weight Control Used During the Past Week

- 13.4% of all females and 27.9% of all males believe they are underweight.
- 42.5% of all females and 17.3% of all males believe they are overweight.
- 63.4% of all females and 16.8% of all males are trying to lose weight.
- 31.0% of all females and 5.6% of all males exercised and dieted to lose weight during the past week.
- During the past 7 days, 6.7% of the females vomited, took diet pills, or both to lose weight.

Nutrition Habits

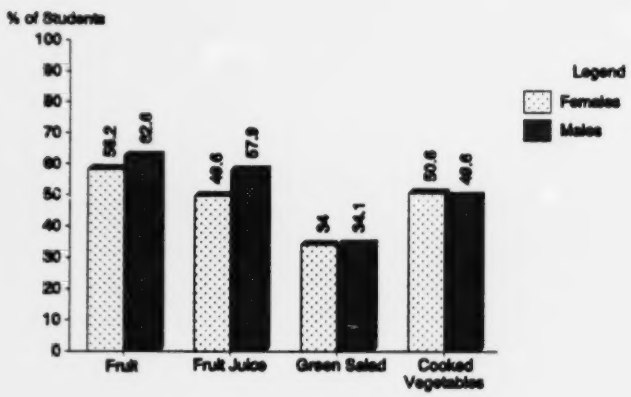
Americans currently consume more than 36% of their total calories from fat. High fat diets, which are associated with increased risk of obesity, heart disease, some types of cancer, and other chronic conditions, often are consumed at the expense of food high in complex carbohydrates and dietary fiber, considered more conducive to health (Public Health Service, 1988). Because lifetime dietary patterns are established during youth, adolescents should be encouraged to choose nutritious foods and to develop healthy eating habits (Select Panel for the Promotion of Child Health, 1981).

Year 2000 Objectives:

Reduce dietary fat intake to an average of 30% of calories or less and average saturated fat intake to less than 10% of calories among people age 2 and older.

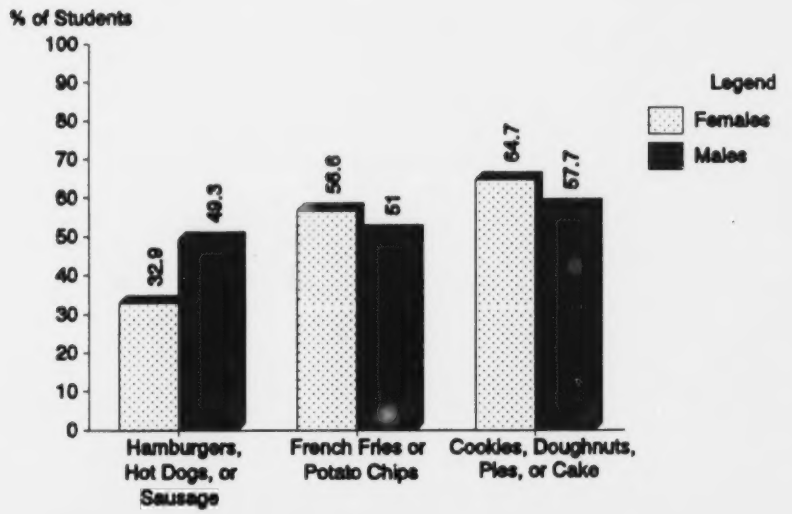
Increase complex carbohydrate and fiber-containing foods in the diets of adults to five or more daily servings for vegetables (including legumes) and fruits, and to six or more daily servings for grain products.

Utah Data:



What Students Ate the Previous Day

- 49.2% of all students reported they ate cooked vegetables the day prior to the survey.
- 34.1% reported they ate green salad the day prior to the survey.
- 60.4% of all students reported they ate fruit the day before the survey.



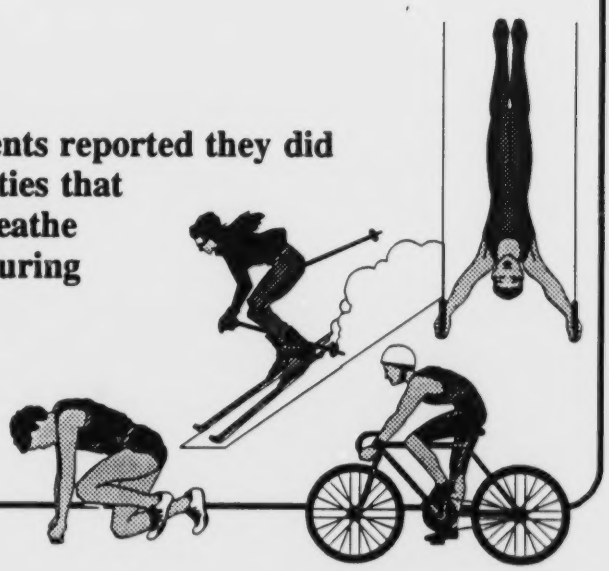
What Students Ate the Previous Day

- 41.0% of all the students reported they ate hamburgers, hot dogs, or sausage the day before the survey.
- Of all those participating in the survey, 51.0% of the students indicated they ate french fries or potato chips the day before the survey.
- 61.1% of all the students responded that they ate cookies, doughnuts, pies, or cake the day prior to the survey.
- Of those students who describe themselves as Hispanic, 46.1% indicated that they did not eat cookies, doughnuts, pies, or cake the day prior to the survey.

It is clear that students in Utah are engaging in nutritional behaviors that put them at risk for the most significant mortality, morbidity, and social problems associated with poor dietary habits.

Physical Inactivity

28.3% of all Utah students reported they did not participate in activities that made them sweat or breathe hard 3 or more times during the past 7 days.



Physical Inactivity

Regular physical activity increases life expectancy (Paffenbarger, Hyde, Wing, & Hsieh, 1986). Additionally, regular physical activity can assist in the prevention and management of coronary heart disease, hypertension, diabetes, osteoporosis, obesity, and mental health problems (Harris, Caspersen, DeFriese, & Estes, 1989). The quantity and quality of school physical education programs have a significant positive effect on the health-related fitness of children (U.S. Department of Health and Human Services, 1985, 1987).

Year 2000 Objectives:

Increase to at least 30% the proportion of people age 6 and older who engage regularly, preferably daily, in light to moderate physical activity for at least 30 minutes per day.

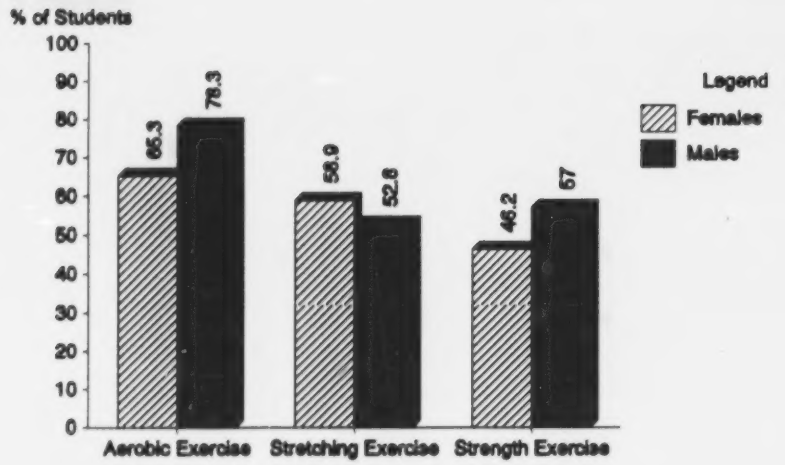
Increase to at least 75% the proportion of children and adolescents age 6-17 who engage in vigorous physical activity that develops and maintains cardiorespiratory fitness 3 or more days per week for 20 or more minutes per occasion.

Reduce to no more than 15% the proportion of people age 6 and older who engage in no leisure-time physical activity.

Increase to at least 40% the proportion of people age 6 and older who regularly perform activities that enhance and maintain strength, endurance, and flexibility.

Utah Data:

- Students who were enrolled in P.E. classes reported participating in an average of 2.5 days of P.E. classes in the past week.
- Of students enrolled in a P.E. class, they reported on average participating in 21-30 minutes of exercise per class.
- 40.4% of students indicated that during the year they participated on at least one team run by the school and 51.7% of students indicated they participated on at least one team sponsored by some organization outside of school.



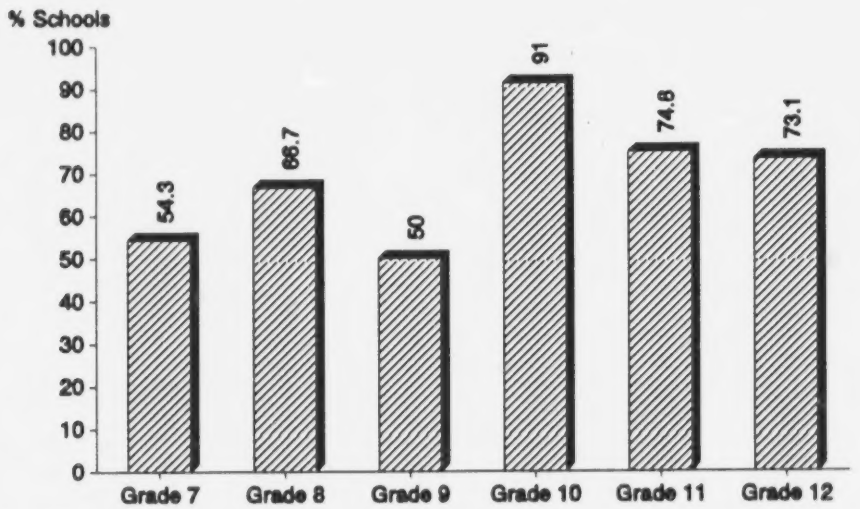
Percentages of Students Who Participated 3 or More Days in Exercise During the Past 7 Days

It appears that some students in Utah are getting adequate exercise; however, the proportion of students who are not getting enough exercise is significantly larger than the Year 2000 Objectives. Additionally, the amount of time that students report exercising in school-based P.E. classes is not sufficient to maintain or promote physical fitness.

SCHOOL HEALTH EDUCATION SURVEY RESULTS

SCHOOL HEALTH EDUCATION SURVEY RESULTS

The 1991 Utah School Health Education Survey asked administrators about the nature and extent of health education currently being provided in their school. Such information as whether formal HIV prevention education was provided at the various grade levels, whether instruction was separate or in the context of a comprehensive school health curriculum, and the numbers of students participating in the instruction was collected. Additional information about the numbers of hours devoted to health education, the organization of program development and instruction, and barriers to implementation was collected. Survey results indicated:



Percentages of Schools Providing Any Kind of HIV Prevention Education

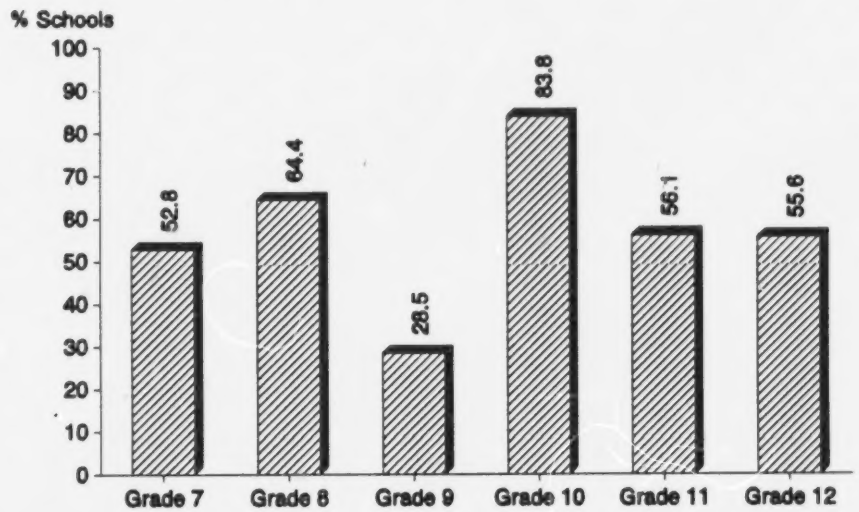
- Approximately 57% of schools with seventh, eighth, or ninth grade classes reported that any kind of HIV prevention education was provided during the school year.
- 79.6% of schools with classes in grades 10, 11, or 12 provided any kind of HIV prevention education during the school year.

Current health education research indicates that, at a minimum, effective HIV prevention education is characterized by continuing instruction throughout elementary, middle, and high school grades. Repeated exposure to health-related concepts and skills-building practice will provide students with the kind of education that will enable them to successfully adopt

behaviors to avoid the most significant mortality, morbidity, disability, and social problems during both youth and adulthood.

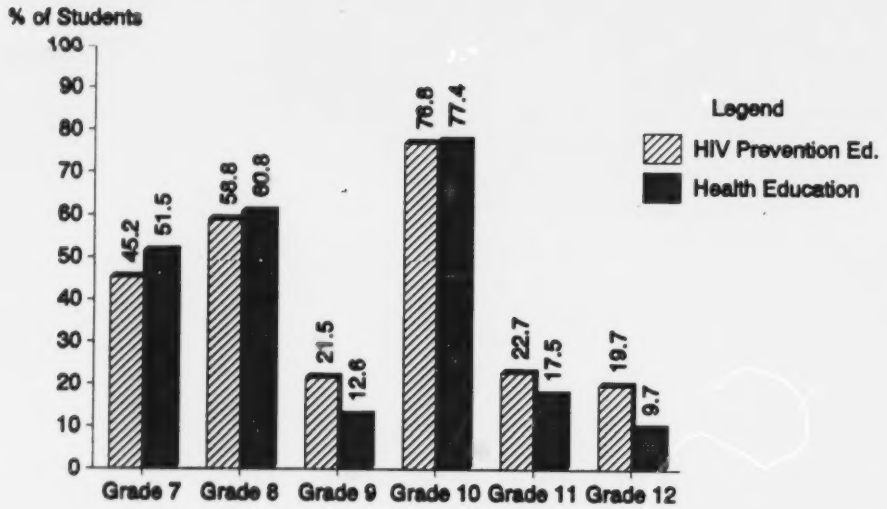
It would appear that many schools in Utah are providing some kind of comprehensive health education and HIV prevention for students in grades 8 and 10. However, greater emphasis on providing such education for all students is needed, especially in grades other than grades 8 and 10. Repeated exposure to these topics is more likely to produce lasting results.

Effective education for any category of health risk behavior is best accomplished within a comprehensive program that emphasizes behavior change and the development of risk-reduction skills. As part of a comprehensive school health education program, five or more hours devoted to a single component (e.g., HIV prevention) during the school year are indicated.



Percentages of Schools Providing HIV Prevention Education Incorporated Within School Health Education

Survey results indicate that slightly more than half of the schools provided HIV prevention education in the context of comprehensive health education in grades 7, 8, 11, or 12. Over 80% of all schools with grade 10 were reported to provide HIV prevention education incorporated into comprehensive health education. However, the percentage of schools providing this type of health education for 9th grade students is low. Similar results hold for estimated numbers of students receiving HIV and comprehensive health education.



Comparisons of the Percentage of Students Receiving HIV Prevention Education and Health Education

According to current health education research, it may take as many as 35 hours of instruction during the school year to provide students with the kind of education that would enable them to adopt healthy behaviors and avoid preventable diseases.

Table 1

Average Number of Class Periods
of HIV Prevention and Health Education
Provided During the School Year by Grade

	HIV Prevention Education	Health Education
Grade 7	2.82	31.41
Grade 8	3.98	37.57
Grade 9	2.10	16.35
Grade 10	5.23	43.37
Grade 11	3.21	29.06
Grade 12	3.24	24.36

In grade 10, students appear to be receiving an adequate number of class periods of health education instruction. However, few students in the other grades, particularly 9th, received this type of instruction.

An important component of any successful program of health education is effective teacher training. Such training provides teachers with the confidence and skills to promote the adoption of healthy behaviors in their students. According to survey results, 75.2% of teachers who provide health education or HIV prevention education received training through the Utah State Office of Education. Of those who taught about HIV during the school year, 6.4% received no special preparation to do so.

Table 2

How Staff Members Who Provide HIV Prevention Education Are Prepared to Teach About HIV

No Special Preparation Provided	6.4%
Written Information/Guidelines Provided	67.9%
Lesson Plans/Classroom Activities Provided	56.0%
Inservice Training Provided by the Utah State Office of Education	75.2%
Inservice Training Provided Within District That Is Not Provided by the Utah State Office of Education	33.5%
Other	17.9%

Effective HIV prevention education programs incorporate a functional knowledge component and a skills-building component into instruction. Approximately 33% of schools reported providing most of the important functional knowledge content areas in 7th through 12th grades.

From Tables 3 and 4, it appears that skills in communication, decision making, and avoiding alcohol and drug use are the focal point of prevention instruction in over 35% of the schools. Those skills for avoiding risk behaviors that are directly related to HIV are taught in less than 43% of all grade: less than 33% of 7th, 9th, 11th and 12th; and some topics are taught in as few as 18% of schools with grade 7. Overall this type of instruction does not appear to consistently be included in current school-based health education programs.

Table 3

Percentage of Schools Teaching Functional Knowledge Topics by Grade

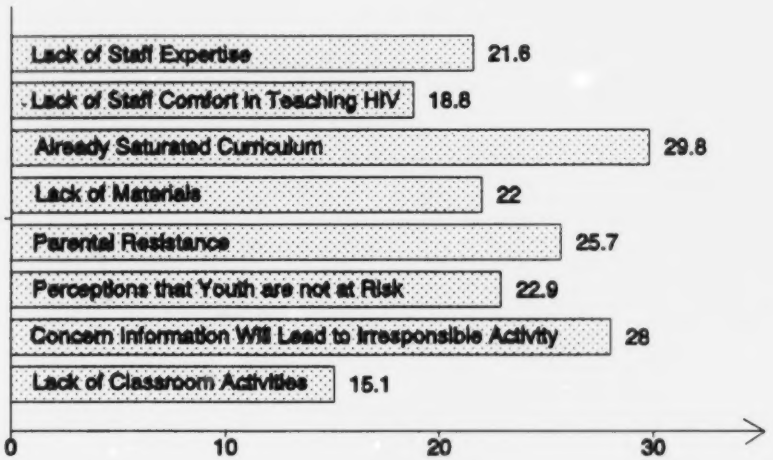
	7	8	9	10	11	12
Definition of HIV and AIDS	35.8	43.1	29.4	47.7	34.4	33.5
How HIV is Transmitted	32.1	42.7	27.5	47.2	33.5	33.5
How HIV is not Transmitted	33.0	41.3	28.0	46.8	33.0	33.5
Reduction of risk behaviors for contraction of AIDS	31.7	40.8	27.5	45.0	32.1	32.6
Compassion for persons infected with HIV	31.7	38.5	23.4	42.7	30.7	31.7
Information about other sexually transmitted diseases	30.3	39.9	25.7	45.4	33.5	33.9

Table 4

Percentage of Schools Teaching Skills by Grade

	7	8	9	10	11	12
Skills in communication	45.9	44.5	39.0	41.7	36.7	38.1
Skills in decision making	45.0	47.7	39.0	45.4	39.0	39.4
Skills to avoid alcohol and drug use	43.1	46.3	32.1	46.8	35.3	34.9
Skills to avoid sexual intercourse	28.4	38.1	28.0	43.1	33.9	33.0
Skills to obtain community HIV-related health services	18.3	30.7	21.6	33.5	25.2	26.1

Barriers to implementing effective comprehensive health education and HIV prevention in Utah schools fall into three categories. The most important barriers appear to be a concern that instruction would encourage, rather than reduce, irresponsible activity; perceived parental resistance; and a lack of time due to an already saturated curriculum. Also important are a lack of staff expertise; a lack of appropriate curriculum materials; and perceptions that youth are not at risk. Finally, schools perceive a lack of staff comfort with teaching about sensitive topics and a lack of classroom activities to be barriers to implementing effective health education programs.



Percentages of Barriers to Implementing HIV Prevention Education as Reported by Schools

SUMMARY AND CONCLUSIONS

SUMMARY AND CONCLUSIONS

Results from the student survey indicate that youth in Utah continue to engage in behaviors that put them at risk for the significant mortality, morbidity, disability, and social problems extending from youth to adulthood. School survey results indicate that schools are not providing the information students need and do not receive repeated opportunities to practice skills that will allow them to adopt healthy behaviors.

Although data about sexual behaviors were not measured directly for youth in Utah, YRBS data collected in surrounding states by University of Utah staff reveal similar patterns for other risk behaviors which may carry over to sexual behaviors as well. In addition, Utah State Department of Health statistics reveal Utah youth are at risk for teenage pregnancies and sexually transmitted diseases, which indicates a not atypical rate of sexual behaviors. Effective school-based health education programs are needed to reduce these behaviors and to provide students with the opportunity to replace them with healthy behaviors. To reduce overall student risk, a health education program must be as comprehensive as possible and incorporate a coordinated, collaborative effort among schools, parents, and the community.

Characteristics of successful programs include skills-based curricula, adequate instructional time, and repeated exposure throughout all grades in school. In addition, teacher training and follow up, peer teacher assistants, parental support, and school-wide and community media programs are important elements of successful programs. Such programs have emphasized the development of skills and self-esteem, nurture social bonding to conventional units of socialization, and provide recognition and reinforcement for newly acquired skills and behaviors.

Families, schools, and communities are jointly responsible for assisting youth to adopt healthy behaviors and avoid preventable diseases. Community leaders can assist school-based health education programs by becoming actively involved in the components that have a community-wide focus. Families can:

- Acquire accurate information about the priority health risk behaviors
- Answer questions honestly -- A good rule of thumb is "if they ask the question, they deserve an honest answer"
- Look for and use everyday events as "teachable moments" for passing along family messages about health and sexuality -- While many children hesitate to ask adults questions about sex, it is not due to lack of interest
- Use TV, movies, books written specifically for kids, and other media to begin discussions about health issues

- Find out what community resources are available
- Consider forming a support group in which parents can share concerns, ideas, and strategies with educators and other community members
- Encourage schools to provide health education programs that address the needs of youth and are based on current knowledge about health education

To provide students with the kinds of educational programs that will enable them to adopt healthy behaviors and avoid preventable diseases, the active support of school administrators, school board members, teachers, and parents will be needed. This report may provide a focal point for engendering the necessary support.

For more information about effective health education programs and assistance in developing such programs in your district please contact the Utah State Office of Education.

REFERENCES

REFERENCES

Baldwin, W. (1990, March). Adolescent pregnancy and childbearing: Rates, trends and research findings from the center for population research of the National Institute of Child Health and Human Development (NICHHD). Author.

Centers for Disease Control. (1989a). Years of potential life lost before age 65: United States, 1987. Morbidity and Mortality Weekly Report, 38, 27-29.

Centers for Disease Control. (1989b). Annual Report. Atlanta, GA: Centers for Disease Control, Division of STD/HIV Prevention.

Centers for Disease Control. (1991, June). HIV/AIDS surveillance. Atlanta, GA: Author.

Division of Sexually Transmitted Diseases. (1990). Annual report, 1989. Center for Prevention Services, Centers for Disease Control, U.S. Public Health Service.

Dryfoos, J. G. (1987). Working paper on youth at risk: One in four in jeopardy. Hastings on the Hudson, New York: Report submitted to the Carnegie Corporation.

Dryfoos, J. G. (1990). Adolescents at risk: Prevalence and prevention. New York: Oxford.

Eggert, L. L., Seyl, C. D., & Nicholas, L. J. (1990). Effects of a school-based prevention program for potential high school dropouts and drug abusers. The International Journal of Addictions, 25(7), 773-801.

Gortmaker, S. L., Dietz, W. H., Sobol, A. M., & Wehler, C. A. (1987). Increasing pediatric obesity in the United States. American Journal of Diseases of Children, 141, 535-540.

Gray, D. Z. (1990a). 1990 Utah Youth Risk Behavior Survey. Unpublished results.

Gray, D. Z., & Walton, D. A. (1990b). 1990 survey report. A report prepared for the Montana Office of Public Instruction. Salt Lake City, UT: University of Utah, Health Education Department, Health Behavior Laboratory.

Gray, D. Z., & Walton, D. A. (1990c). 1990 surveillance report. A report prepared for the Wyoming AIDS/HIV Education School Health Project. Salt Lake City, UT: University of Utah, Health Education Department, Health Behavior Laboratory.

Gray, D. Z., Walton, D. A., & Alderfer, M. A. (1991). 1991 Montana youth risk behavior survey and school health education survey report. A report prepared for the Montana Office of Public Instruction. Salt Lake City, UT: University of Utah, Health Education Department, Health Behavior Laboratory.

Harris, S. S., Caspersen, C. J., DeFriese, G. H., & Estes, E. H. (1989). Physical activity counseling for healthy adults as a primary preventive intervention in the clinical setting. JAMA, 261, 3590-3598.

Hayes, C. D. (Ed.). (1987). Risking the future: Adolescent sexuality, pregnancy, and childbearing. Washington, DC: National Academy Press.

Henshaw, S. K., & Van Vort, J. (1989, March/April). Research note: Teenage abortion, birth and pregnancy statistics. Family Planning Perspectives.

Hofferth, S. L., & Hayes, C. D. (Eds.). (1987). Risking the future: Adolescent sexuality, pregnancy, and childbearing. Panel on Adolescent Pregnancy and Childbearing, Committee on Child Development Research and Public Policy, Commission on Behavioral and Social Sciences and Education, National Research Council. Washington, DC: National Academy Press.

Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1987). National trends in drug use and related factors among american high school students and young adults, 1975-1986 (DHHS Publication No. ADM 87-1535). Rockville, MD: National Institute on Drug Abuse.

Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1989). Drug use, drinking, and smoking: National survey results from high school, college, and young adult populations, 1975-1988 (DHHS Publication No. ADM 89-1638). Rockville, MD: National Institute of Drug Abuse.

Louis Harris & Associates. (1986). American teens speak: Sex, myths, TV and birth control. A poll conducted for the Planned Parenthood Federation of America.

Miller, L. P., & Laing, N. (1989, October). Communicating with teens about sexuality: Parent involvement. A paper presented at the annual meeting of the American Public Health Association.

National Center for Health Statistics. (1988). National Survey of Family Growth. Special tabulations for the NICHHD.

National Center for Health Statistics. (1989). Advance report of final mortality statistics, 1987. Monthly Vital Statistics Report, 38(5 Supplement). Hyattsville, MD: Public Health Service.

National Center for Health Statistics. (1990a). Health United States, 1989 (DHHS Publication No. 90-1232). Hyattsville, MD: U.S. Department of Health and Human Services.

National Center for Health Statistics. (1990b). Prevention profile. Health, United States, 1989 (DHHS Publication No. 90-1232). Hyattsville, MD: U.S. Department of Health and Human Services.

National Committee for Injury Prevention and Control. (1989). Injury prevention: Meeting the Challenge. Supplement to American Journal of Preventive Medicine, 5(3).

National Highway Traffic Safety Administration. (1980). A report to the Congress on the effect of motorcycle helmet use law repeal: A case for helmet use. Washington, DC: Department of Transportation.

National Highway Traffic Safety Administration. (1987). The economic cost to society of motor vehicle accidents (Technical Report DOT HS 809-195). Washington, DC: U.S. Department of Transportation.

National Highway Traffic Safety Administration. (1988). Fatal accident reporting system, 1987. Washington DC: Department of Transportation.

Office of Smoking and Health. (1989). Reducing the health consequences of smoking: 25 years of program. A report of the Surgeon General (DHHS Publication No. CDC 89-8411). Washington, DC: U.S. Department of Health and Human Services.

Paffenbarger, R. S., Hyde, R. T., Wing, A. L., & Hsieh, C. C. (1986). Physical activity, all cause mortality, and longevity of college alumni. New England Journal of Medicine, 314, 605-613.

Perrine, M., Peck, R., & Fell, J. (1988). Epidemiological perspectives on drunk driving. In Surgeon General's Workshop on Drunk Driving: Background Papers. Washington DC: U.S. Department of Health and Human Services.

Public Health Service. (1986). The health consequences of using smokeless tobacco: A report of the advisory committee to the Surgeon General (NIH Publication No. 86-2874). Bethesda, MD: U.S. Department of Health and Human Services.

Public Health Service. (1988). The Surgeon General's report on nutrition and health (DHHS Publication No. 88-50210). Washington, DC: U.S. Department of Health and Human Services.

Rivara, F. P. (1985). Traumatic deaths of children in the United States: Currently available prevention strategies. Pediatrics, 75(3), 456-462.

Rotatori, A. F., & Fox, R. A. (1989). Obesity in children and youth: Measurement, characteristics, causes, and treatment. Springfield, IL: Charles C. Thomas.

Select Panel for the Promotion of Child Health. (1981). Report to the United States conference and the secretary of health and human services: Vol. I. Major findings and recommendations & Vol. IV. Background papers (DHHS Publication No. PHS79-55071. Washington, DC: U.S. Government Printing Office.

Sonenstein, F. L., Pleck, J. H., & Ku, L. C. (1989, July/August). Sexual activity, condom use and AIDS awareness among adolescent males. Family Planning Perspectives.

Thompson, R. S., Rivara, F. P. O., & Thompson, D. C. (1989). A case-control study of the effectiveness of bicycle safety helmets. New England Journal of Medicine, 320(21), 1364-1366.

U.S. Department of Health and Human Services. (1985). National children and youth fitness study. Journal of Physical Education, Recreation, and Dance, 56, 44-90.

U.S. Department of Health and Human Services. (1987). National children and youth fitness study II. Journal of Physical Education, Recreation, and Dance, 58, 50-96.

U.S. Department of Health and Human Services. (1990a). Healthy people: National health promotion and disease prevention objectives. U.S. Department of Health and Human Services, Public Health Service, Conference Edition, September.

U.S. Department of Health and Human Services. (1990b). Prevention '89/'90: Federal programs and progress. Washington DC: U.S. Government Printing Office.

Utah Department of Health. (1987, December). Communicable disease newsletter. Salt Lake City, UT: Utah Department of Health, Division of Community Health Services, Bureau of Epidemiology.

Utah Department of Health. (1988, November). Utah's vital statistics annual report: 1987. Salt Lake City, UT: Utah Department of Health, Office of Administration, Bureau of Vital Records and Health Statistics.

Utah Department of Health. (1990, October). Approaching the year 2000 and beyond: Public health strategic planning issues. Salt Lake City, UT: Author.

Utah Department of Health. (1991, January). Utah's vital statistics summary. Salt Lake City, UT: Utah Department of Health, Bureau of Vital Records and Health Statistics, Center for Health Statistics.

Utah Department of Health. (1991, April). Induced abortions in Utah: 1989. Salt Lake City, UT: Utah Department of Health, Administrative Services, Bureau of Vital Records and Health Statistics, Center for Health Statistics.

Utah Department of Public Safety. (1991, May). Utah traffic accident summary. Salt Lake City, UT: Utah Department of Public Safety, Highway Safety Office.

Westoff, C. F. (1988). Contraceptive paths toward reduction of unintended pregnancy and abortion. Family Planning Perspective, 20(1), 413.

Wood, N. P., Jr., & Mercy, J. A. (1988). Unintentional firearm related fatalities, 1970-1984. Morbidity and Mortality Weekly Report, 37(SS1), 47-52.

THE UNIVERSITY OF UTAH

This report was completed with support provided through cooperative agreement #U63-CCU803058-04 with the Division of Adolescent and School Health of the U.S. Centers for Disease Control

BEST COPY AVAILABLE